PATENT CLAIMS

1. Circulation pump for fluid with a rotatable impeller (36) and a degassing device (52; 76; 98), wherein the degassing device (52; 76; 98) comprises a gas line (54; 78; 100) opening at a first end (56; 80; 108) into an area (58) on the impeller (36) and opening at a second end (62; 92; 114) into an area with a lower pressure in relation to an interior pressure of the circulation pump.

2. Circulation pump as defined in claim 1, characterized in that the first end (56; 80; 108) of the gas line (54; 78; 100) opens into an area (58) on the impeller (36) where fluid eddies are able to form.

3. Circulation pump as defined in claim 1 or 2, characterized in that the first end (56; 80; 108) of the gas line (54; 78; 100) opens into an area (58) on the impeller (36) where gas is able to accumulate.

4. Circulation pump as defined in any one of the preceding claims, characterized in that a higher interior pressure than external pressure prevails at least during operation.

5. Circulation pump as defined in claim 4, characterized in that the second end (62; 92; 114) of the gas line (54; 78; 100) opens into an exterior space.

6. Circulation pump as defined in any one of the preceding claims, characterized in that a valve is arranged at the second end (62; 92; 114) of the gas line (54; 78; 100).

7. Circulation pump as defined in any one of the preceding claims, characterized in that the gas line (54; 78; 100) is adapted to be closed at its second end.

8. Circulation pump as defined in claim 7, characterized in that the gas line (54) is adapted to be closed manually.

9. Circulation pump as defined in claim 7 or 8, characterized in that a screw (66) is provided for closing the gas line (54).

10. Circulation pump as defined in claim 7, characterized in that the gas line (78; 100) is adapted to be closed automatically.

11. Circulation pump as defined in claim 10, characterized in that a float (86; 106) is provided for closing the gas line (78; 100), said float being in effective fluid communication with an interior (44) of the circulation pump.

12. Circulation pump as defined in claim 11, characterized in that the float (86; 106) is arranged in a receiving chamber (84; 104) of the gas line (78; 100).

13. Circulation pump as defined in any one of the preceding claims, characterized in that the gas line (54; 78; 100) is guided through an intake area (46) of the circulation pump.

14. Circulation pump as defined in any one of the preceding claims, characterized in that the first end (56; 80; 108) of the gas line (54; 78; 100) opens into an area (58) in the vicinity of a sealing gap (72) between an intake area (46) and the impeller (36).

15. Circulation pump as defined in any one of the preceding claims, characterized in that the gas line (54; 78; 100) comprises a pipe (70; 82; 102).

16. Circulation pump as defined in any one of the preceding claims, characterized in that the gas line (54; 78) is aligned essentially parallel to the axis of rotation (38) of the impeller (36) at least in one section (70; 82).

17. Circulation pump as defined in any one of claims 1 to 15, characterized in that the gas line (100) is aligned at an angle to an axis of rotation (38) of the impeller (36) at least in one section (102).

18. Circulation pump as defined in any one of the preceding claims, characterized in that a device (64) generating underpressure is arranged at the second end (62; 92) of the gas line (54; 78).

19. Circulation pump as defined in any one of the preceding claims, characterized by a design as a rotary pump.

20. Circulation pump as defined in any one of the preceding claims, characterized in that the impeller (36) is arranged on a rotor (26) mounted in a spherical bearing (28).

21. Circulation pump as defined in any one of the preceding claims, characterized in that the first end (56; 80; 108) of the gas line (54; 78; 100) faces a central area (60) of the impeller (36).

22. Circulation pump as defined in any one of the preceding claims, characterized in that the first end (56; 80; 108) of the gas line (54; 78; 100) faces a side (50) of the impeller (36) allocated to an intake side (46) of the circulation pump.

23. Circulation pump as defined in any one of the preceding claims, characterized in that the impeller (36) has a cavity (37), the first end (56; 80; 108) of the gas line (54; 78; 100) opening into said cavity.